

## Wisconsin Black Bear Population Project Summary

### Project overview:

The goal of this project was to produce an independent estimate of Wisconsin's black bear population for comparison with the model used by the DNR. A tetracycline based mark-recapture technique was employed. This technique is used to estimate bear populations in Minnesota and Michigan. Bears were "marked" using tetracycline laced baits placed in the summer of 2006. Baits were placed by volunteers from the Wisconsin Bear Hunters Association. Bears were "recaptured" in the harvests of 2006 and 2007. Ribs were submitted by hunters from harvested bears and analyzed for the presence of tetracycline. The ratio of marked to unmarked individuals in the "recapture" was used to calculate the total number of individuals in the population.

### Summary Statistics:

Baits placed: 2,235  
Baits hit by bears: 971

Ribs collected in 2006: 2,587  
Tetracycline positive ribs: 69

Ribs collected in 2007: 2,378  
Tetracycline positive ribs: 44

### Population Estimates

	State	A	B	D	ABD	C
Population	36,833	9,200	5,597	9,661	25,336	11,453
Upper 95%	43,106	11,904	7,600	12,560	30,038	16,389
Lower 95%	30,560	6,497	3,594	6,762	20,634	6,516
Density/sq mile		1.497	0.976	1.519	1.389	

### Future work:

The results of this research have been incorporated into Wisconsin's bear management plan. The bear management committee recommended 2009 quota levels be increased 50%. The DNR has committed to repeating this study in 2011 to validate the results and monitor the impact of higher harvest on the population. This study has raised considerable questions about the states bear population. The disparity between this estimate and previous estimates is yet to be resolved. Further research is required to identify techniques for effective long term monitoring of Wisconsin's black bear population.